ing the best methods of working out the details of construction, that is, the best arranged forms of the several parts, how to conveniently and securely unite them, etc., remembering always that the frame work must possess that happy quality, uniform strength. The final solution of these difficulties can not be stated yet. The writer has endeavored to point out a few important principles and has indicated the lines along which it seems the work may best proceed, but many ingenious minds by repeated experimentation must achieve new improvements before it can be said that the best has been attained.

(Concluded in the July REVIEW.)

NOTES BY THE EDITOR.

MEXICAN CLIMATOLOGICAL DATA.

In order to extend the isobars and isotherms southward so that the students of weather, climate and storms in the United States may properly appreciate the influence of the conditions that prevail over Mexico the Editor has compiled the following table from the Boletina Mensual for April, 1896, as published by the Central Meteorological Observatory of Mexico. The data there given in metric measures have, of course, been converted into English measures. The barometric means are as given by mercurial barometers under the influence of local gravity, and therefore need reductions to standard gravity, depending upon both latitude and altitude; the influence of the latter is rather uncertain, but that of the former is well known. For the sake of conformity with the other data published in this REVIEW these corrections for local gravity have not been applied.

Mexican data for April, 1896.

Stations.	Altitude.	Mean barometer.	Mean temperature.	Relative humidity.	Precipitation.	Prevailing direction.	
						Wind.	Cloud.
	Feet.	*Inch.*	° *F.*	%	*Inch.*		
Aguascalientes	6,112.3	.....	.....	.....	.....	.....	.....
Campeche	40.4	.....	.....	.....	.....	.....	.....
Colima (Seminario)	.....	28.27	77.9	61	0.00	ssw.	w.
Colima	1,291.7	.....	80.2	.....	.....	.....	.....
Culiacan	112.2	.....	.....	.....	.....	.....	.....
Guadalajara (H. de B.)	5,141.2	.....	.....	.....	.....	.....	.....
Guadalajara (Obs. d. Est.)	5,186.4	24.97	73.8	81	4.92	sw.	.....
Guanajuato	6,761.3	23.64	71.2	38	1.00	ene.	sw.
Jalapa	4,757.3	25.56	68.0	75	1.72	e.	.....
Lagos (Liceo Guerra)	.....	24.13	71.1	39	0.70	ne.	sw.
Leon	5,901.0	24.28	72.5	34	0.30	*	†
Mazatlan	24.6	29.92	73.8	75	0.00	nw.	sw.
Merida	50.2	29.95	81.1	59	0.00	ese.	se.
Mexico (Obs. Cent.)	7,488.7	23.08	65.5	46	0.72	n.	sw.
Mexico (E. N. de S.)	7,480.5	23.15	64.9	51	0.43	se.	.....
Morelia (Seminario)	6,401.0	23.95	66.7	52	1.44	sw.	w.
Oaxaca	5,164.4	25.06	74.8	51	2.43	ese.	e.
Pabellon	6,312.4	.....	.....	.....	.....	.....	.....
Pachuca	7,956.3	22.58	60.6	63	1.98	nne.	.....
Progreso	.....	.....	.....	.....	.....	.....	.....
Puebla (Col. d. Est.)	7,118.2	.....	.....	.....	.....	.....	.....
Puebla (Col. Cat.)	7,112.0	23.37	67.5	47	1.07	.....	.....
Queretaro	6,069.7	24.16	70.3	46	0.20	e.	.....
Real del Monte (E. de H.)	9,095.2	.....	.....	.....	.....	.....	.....
Saltillo (Col. S. Juan)	5,376.7	24.82	69.1	61	3.03	ssw.	n.
San Luis Potosi	6,201.9	24.10	69.3	51	0.68	e.	w.
Silao	6,063.1	.....	.....	.....	.....	.....	.....
Tacambaro	.....	.....	.....	.....	.....	.....	.....
Tacubaya (Obs. Nac.)	7,620.2	22.95	63.7	51	0.70	nw.	.....
Tampico (Hos. Mil.)	.....	.....	.....	.....	.....	.....	.....
Tehuacan	5,152.8	.....	.....	.....	.....	.....	.....
Toluca	8,612.4	21.92	62.4	49	1.19	wsw.	se.
Trejo (Hac. Silao, Gto.)	.....	.....	.....	.....	3.59	.....	.....
Trinidad (near Leon)	6,010.1	.....	.....	.....	.....	.....	.....
Veracruz	47.9	.....	.....	.....	.....	.....	.....
Zacatecas	8,015.2	22.54	67.6	34	0.00	sw.	sw.
Zapotlan (Seminario)	5,124.8	25.05	73.4	.....	0.54	sw.	w.

* Wsw. and ssw. † Sw. and e.

Mexican data for May, 1896.

Stations.	Altitude.	Mean barometer.	Mean temperature.	Relative humidity.	Precipitation.	Prevailing direction.	
						Wind.	Cloud.
	Feet.	*Inch.*	° *F.*	%	*Inch.*		
Aguascalientes	6,112.3	.....	.....	.....	.....	.....	.....
Campeche	40.4	.....	.....	.....	.....	.....	.....
Colima (Seminario)	1,291.7	28.26	80.4	63	0.94	ssw.	w.
Colima	1,291.7	.....	82.2	.....	.....	.....	.....

Mexican data for May, 1896—Continued.

Stations.	Altitude.	Mean barometer.	Mean temperature.	Relative humidity.	Precipitation.	Prevailing direction.	
						Wind.	Cloud.
	Feet.	*Inch.*	° *F.*	%	*Inch.*		
Culiacan	112.2	.....	.....	.....	.....	.....	.....
Guadalajara (H. de B.)	5,141.2	.....	.....	.....	.....	.....	.....
Guadalajara (Obs. d. Est.)	5,186.0	.....	.....	.....	.....	.....	.....
Guanajuato	6,761.3	23.66	72.7	36	0.72	ene.	e.
Jalapa	4,757.3	25.53	71.4	75	2.97	nnw.	.....
Lagos (Liceo Guerra)	6,274.5	.....	.....	.....	.....	.....	.....
Leon	5,901.0	24.27	76.1	31	0.28	*	†
Mazatlan	24.6	29.89	77.7	78	0.00	w.	sw.
Merida	50.2	29.88	85.1	60	1.12	ese.	e.
Mexico (Obs. Cent.)	7,488.7	23.07	67.6	47	0.47	n.	‡
Mexico (E. N. de S.)	7,480.5	23.05	67.6	50	0.46	se.	.....
Morelia (Seminario)	6,401.0	23.94	69.6	50	0.48	s.	ne.
Oaxaca	5,164.4	25.05	77.5	53	2.69	se.	ne.
Pabellon	6,312.4	.....	.....	.....	.....	.....	.....
Pachuca	7,956.3	22.58	63.3	59	0.41	ne.	.....
Progreso	.....	.....	.....	.....	.....	.....	.....
Puebla (Col. d. Est.)	7,118.2	.....	.....	.....	.....	.....	.....
Puebla (Col. Cat.)	7,112.0	23.37	69.6	54	3.99	.....	.....
Queretaro	3,069.7	24.17	72.1	47	0.37	e.	.....
Real d. Monte (E. de H.)	9,095.2	.....	.....	.....	.....	.....	.....
Saltillo (Col. S. Juan)	5,376.7	24.85	76.5	53	1.93	n.	sw.
San Luis Potosi	6,201.9	24.11	73.0	49	0.59	e.	w.
Silao	.....	24.18	76.1	60	0.10	sw.	ne.
Tacambaro	.....	.....	.....	.....	.....	.....	.....
Tacubaya (Obs. Nac.)	7,620.2	.....	.....	.....	.....	.....	.....
Tampico (Hos. Mil.)	.....	.....	.....	.....	.....	.....	.....
Tehuacan	5,152.8	.....	.....	.....	.....	.....	.....
Toluca	8,612.4	21.91	62.8	45	0.34	wsw.	ne.
Trejo (Hac. Silao, Gto.)	.....	.....	.....	.....	.....	.....	.....
Trinidad (near Leon)	6,010.1	.....	.....	.....	.....	.....	.....
Veracruz	47.9	29.94	82.9	76	0.83	se.	se.
Zacatecas	8,015.2	22.54	69.8	35	0.18	w.	e.
Zapotlan (Seminario)	5,124.8	.....	.....	.....	.....	.....	.....

* W. and wsw. † N., e., and ne. ‡ Ne. and nw.

KITES, BALLOONS, AND CLOUDS.

The excellent series of investigations bearing on the theory and practice of flying kites for meteorological purposes now being published in the MONTHLY WEATHER REVIEW will, we hope, stimulate many others to enter this fascinating and important field of work. Kite flying was apparently first practised for meteorological purposes in the United States by Benjamin Franklin, 1752. Then came a long interval up to the work done by the Kite Club of Philadelphia in 1837, as referred to by Espy, and again a long interval until Mr. Eddy began his work at Bayonne in 1890; although, perhaps in justice to himself, the Editor may remark that in July, 1876, having for the first and only time in his life a chance to spend a week on the Jersey coast, he then flew kites at Ocean Beach and Asbury Park in order to determine the depth of the sea breeze, and had the pleasure of seeing the kite which had been borne landward by the sea breeze soon reach the upper return current and be borne seaward by it. (See Preparatory Studies, p. 92.)

Mr. McAdie's experiments of 1885 and 1892 at Blue Hill in using the balloon for studies in atmospheric electricity, and especially the work done by him and Mr. Potter in Washington in 1894 and 1895, were promptly followed by encouraging action on the part of the Chief of the Weather Bureau, and in his first publication, Professor Moore expressed his intention to prosecute explorations in the upper air by all possible means. The excellent results thus far attained by Professor Marvin are, we hope, but an earnest of the future work at Washington.

On the other hand, it is desirable that similar explorations by kites be carried on in very many portions of the North American continent, and we take great pleasure in stating that not only is such work now being done at Blue Hill Observatory, but also by Messrs. Hammon and McAdie at San Francisco, and Mr. Coe, voluntary observer at Kipp, Teton Co., Mont. (W. 112° 30′, N. 48° 40′).

We hope soon to be able to lay before our readers a full account of the work done by these gentlemen and that many others profiting by the published results of Professor Marvin's work will construct for themselves cellular kites and determine the altitudes of the clouds and the directions of the upper winds, even if they can not get continuous records of temperature and pressure.

To those who prefer the use of the balloon for atmospheric exploration we can reccommend the ordinary toy balloon of the larger size. These can be purchased by the gross of the wholesale dealers in New York City at about two cents apiece. Larger ones made of paper, up to twelve feet in diameter, can also be made. The homemade, hot air balloon, constructed by pasting together a few sheets of tissue paper and filling with hot air from coal oil burning on a saturated sponge, will ascend to considerable heights and give an accurate idea of the motion of the lower currents of air.

To those who do not readily take to the construction of mechanical devices the most minute observation of the motions and changes going on in the clouds themselves offers a fascinating field of study. Those observers who live on mountains and in the plateau regions should be especially on the lookout for what are called phosphorescent clouds which, in Europe, appear to be seen mostly in the summer time, late at night, in the northern sky. If two or three neighboring observers would agree to observe the apparent angular altitude of cirrus and other high clouds, especially those of peculiar forms, they would thus accumulate the material for calculating the altitude in miles and the true velocity of such clouds and add an important item to our scanty knowledge of this subject.

Observers on mountain tops have opportunity for making many valuable studies of the surrounding air, and we hope that those who are thus favored will communicate through our columns the result of their work to others.

METEOROLOGICAL TABLES.

By A. J. HENRY, Chief of Division of Records and Meteorological Data

For text descriptive of these tables and charts see p. 16.